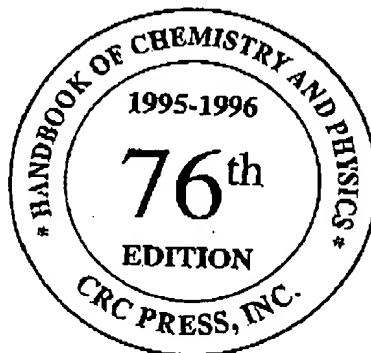


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# IONIC RADII IN CRYSTALS

Howard T. Evans, Jr.

This table lists ionic radii  $R_i$  in Ångstrom units corresponding to various coordination numbers  $CN$ . Values are based on  $R_i(O^{2-}) = 1.40$  Å for  $CN = 6$ .

sq = square and py = pyramidal.

## REFERENCE

Shannon, R. D., *Acta Crystallogr.*, A32, 751, 1974.

Ion	CN	$R_i/\text{Å}$	Ion	CN	$R_i/\text{Å}$	Ion	CN	$R_i/\text{Å}$
<b>Anions</b>			Cr (+6)	4	0.26	Mo (+5)	6	0.61
F (-1)	6	1.33	Cs (+1)	8	1.74	Mn (+6)	6	0.59
Cl (-1)	6	1.81		12	1.98		7	0.73
Br (-1)	6	1.96	Cu (+1)	2	0.46	Na (+1)	6	1.02
I (-1)	6	2.20		4	0.60		9	1.24
OH (-1)	6	1.37	Cu (+2)	4sq	0.57	Nb (+3)	6	0.72
O (-2)	3	1.36		6	0.73	Nb (+4)	6	0.68
	6	1.40	Dy (+3)	8	1.03	Nb (+5)	6	0.64
S (-2)	6	1.84	Er (+3)	8	1.00	Ni (+2)	4sq	0.44
Se (-2)	6	1.98	Eu (+2)	8	1.25		6	0.69
Te (-2)	6	1.07	Eu (+3)	8	1.07	Ni (+3)	6	0.56
			Fe (+2)	6	0.61	Os (+4)	6	0.63
			Fe (+3)	4	0.49	Os (+5)	6	0.58
<b>Cations (alphabetical)</b>				6	0.55	Os (+6)	6	0.55
Ag (+1)	4	1.00		6	0.47	Os (+8)	4	0.39
	6	1.15	Ga (+3)	4	0.62	P (+5)	4	0.17
Ag (+2)	4sq	0.79		6	0.62	Pb (+2)	6	1.19
	6	0.94	Gd (+3)	8	1.05		10	1.40
Al (+3)	4	0.39	Gc (+4)	4	0.39	Ph (+4)	4	0.65
	6	0.54		6	0.53		6	0.78
As (+3)	6	0.58	Hf (+4)	8	0.83	Pd (+2)	4sq	0.64
As (+5)	4	0.34	Hg (+1)	6	1.19	Pd (+3)	6	0.76
	6	0.46	Hg (+2)	2	0.69	Pd (+4)	6	0.62
Au (+1)	6	1.37		6	1.02	Pm (+3)	8	1.09
Au (+3)	4sq	0.64	I (+5)	3py	0.44	Pr (+3)	8	1.13
	6	0.85	I (+7)	4	0.42	Pt (+2)	4sq	0.60
Ba (+2)	8	1.42		6	0.53	Pt (+4)	6	0.63
	12	1.61	In (+3)	4	0.62	Ru (+2)	8	1.62
Be (+2)	4	0.27		6	0.80		12	1.84
	6	0.45	Ir (+3)	6	0.68	Rh (+1)	8	1.61
Bi (+3)	6	1.03	Ir (+4)	6	0.63		12	1.72
Bj (+5)	6	0.76	Ir (+5)	6	0.57	Re (+4)	6	0.63
Br (+5)	3py	0.31	K (+1)	8	1.51	Re (+5)	6	0.58
Br (+7)	4	0.25		12	1.64	Re (+6)	6	0.55
Ca (+2)	6	1.00	La (+3)	8	1.16	Re (+7)	4	0.38
	8	1.12	Li (+1)	4	0.59		6	0.53
Cd (+2)	4	0.78		6	0.76	Rh (+3)	6	0.67
	6	0.95	Lu (+3)	8	0.98	Rh (+4)	6	0.60
	8	1.10	Mg (+2)	6	0.72	Rh (+5)	6	0.55
Ce (+3)	8	1.14	Mn (+2)	6	0.67	Ru (+3)	6	0.68
Ce (+4)	6	0.87	Mn (+3)	6	0.58	Ru (+4)	6	0.62
	8	0.97	Mn (+4)	4	0.39	Ru (+5)	6	0.57
Cl (+5)	3py	0.12		6	0.53	Ru (+7)	4	0.38
Cl (+7)	4	0.08	Mn (+5)	4	0.33	Ru (+8)	4	0.36
Co (+2)	6	0.65	Mn (+6)	4	0.26	S (+4)	6	0.37
Co (+3)	6	0.55	Mn (+7)	4	0.25	S (+6)	4	0.37
Cr (+2)	6	0.73	Mo (+3)	6	0.69		6	0.29
Cr (+3)	6	0.62	Mo (+4)	6	0.65			

# IONIC RADII IN CRYSTALS (CONTINUED)

Ion	CN	$R/\text{\AA}$	Ion	CN	$R/\text{\AA}$	Ion	CN	$R/\text{\AA}$
Sb (+3)	6	0.76	Tc (+4)	6	0.97	V (+3)	6	0.64
Sb (+5)	6	0.60	Te (+6)	6	0.56	V (+4)	5	0.53
Sc (+3)	6	0.73	Th (+4)	8	1.05		6	0.58
Se (+4)	6	0.50	Ti (+3)	6	0.67	V (+5)	5	0.46
Se (+6)	4	0.50	Ti (+4)	6	0.61		6	0.54
	6	0.42	Tl (+1)	8	1.59	W (+4)	6	0.66
Si (+4)	4	0.26		12	1.70	W (+5)	6	0.62
Sm (+3)	8	1.08	Tl (+3)	6	0.89	W (+6)	4	0.42
Sr (+2)	8	1.26	Tm (+3)	7	1.09		6	0.60
	12	1.44	U (+3)	6	1.03	Y (+3)	8	1.02
Ta (+3)	6	0.72	U (+4)	6	0.89	Yb (+2)	8	1.14
Ta (+4)	6	0.68	U (+5)	6	0.76		8	0.99
Ta (+5)	6	0.64	U (+6)	2	0.45	Zn (+2)	4	0.60
Tb (+3)	8	1.18		7	0.81		6	0.74
Tb (+4)	8	0.88	V (+2)	6	0.79	Zr (+4)	8	0.84